

AMENDMENTS TO THE CLAIMS

1. (Currently amended) A method for providing information and services of a collaboration system adapted for communicating changes to at least one shared space in a data change format that allows a plurality of members to interact collaboratively in a shared folder in a folder-based file system that is part of an operating system with a user interface, the method comprising:

operating a processor to:

- (a) receiving through ~~including~~ a collaborative interface in the operating system user interface, ~~the collaborative interface adapted to receive~~ user input identifying at least one synchronized file;
- (b) using the collaborative interface to display information regarding the members collaborating within the context of a shared folder through the use of the collaboration system;
- (c) automatically determining changes made in the folder-based file system, the folder-based file system being separate from the shared space of the collaboration system;
- (d) in response to a determined change, determining whether the change relates to the at least one synchronized file; and
- (e) when the change relates to the at least one synchronized file, communicating the change to other members via at least one data change message formatted in accordance with the data change format of the collaboration system.

2. (Original) The method of claim 1 wherein step (a) comprises designing and implementing a portion of the user interface as the collaborative interface.

3. (Original) The method of claim 1 wherein step (a) comprises enhancing the user interface to include the collaborative interface.

4. (Original) The method of claim 1 wherein step (a) comprises replacing a portion of the user interface with the collaborative interface.

5. (Previously presented) The method of claim 1, further comprising, in response to the user input identifying a synchronized file received using the collaborative interface, creating a shared space within the collaboration system associated with the synchronized file.

6. (Previously presented) The method of claim 5, further comprising using the collaborative interface to invite one of the plurality of members to join the shared space.

7. (Original) The method of claim 5 wherein step (b) comprises displaying information regarding members in the shared space.

8. (Original) The method of claim 7 wherein the information regarding members in the shared space includes awareness information that indicates whether each member is on-line and available.

9. (Original) The method of claim 1 wherein step (c) comprises, for each synchronized file in the folder-based file system, maintaining a snapshot that contains sufficient information to allow a determination to be made whether that file has changed.

10. (Previously presented) The method of claim 9 wherein step (c) further comprises receiving a notification from the folder-based file system that changes have been made to the folder-based file system and step (d) further comprises in response to the notification, examining each file snapshot to determine which file has changed.

11. (Previously presented) The method of claim 1 wherein step (c) comprises connecting the operating system to the collaborative system via a web services interface.

12. (Previously presented) The method of claim 1 wherein step (e) comprises maintaining a list of members who are in the shared folder.

13. (Previously presented) The method of claim 12 wherein step (e) further comprises for each member who is in the shared folder, maintaining information indicating whether that member has a copy of contents of at least one synchronized file in the shared folder.

14. (Previously presented) The method of claim 13 further comprising providing a stub file to each shared folder member who does not have the contents of the at least one synchronized file.

15. (Original) The method of claim 14 further comprising displaying the stub file in the user interface.

16. (Original) The method of claim 15 further comprising downloading file contents from a source when a user selects the stub file display.

17. (Original) The method of claim 16 wherein the source comprises a server.

18. (Original) The method of claim 16 wherein the source comprises a computer of another member.

19. (Original) The method of claim 1 further comprising using the collaborative system to disseminate file changes to members in the shared folder.

20. (Previously presented) The method of claim 19 wherein the file changes are disseminated as compressed representations of the file changes represented as binary differences.

21. (Previously presented) The method of claim 1 wherein step (b) comprises using the collaborative interface to create a shared space underlying the operating system shared folder within which collaboration will occur and wherein the method further comprises:

forwarding a first change made in the shared space to a file to a document share engine in the shared space; and

using the document share engine to make the file change to a corresponding file in the folder-based file system.

22. (Previously presented) The method of claim 21 wherein using the document share engine comprises using a file synchronizer in the collaborative system that makes the first change in the folder based file system under control of the document share engine.

23. (Previously presented) The method of claim 21 further comprising:
using the document share engine to notify each of the plurality of members that the first change has occurred.

24. (Previously presented) The method of claim 21 further comprising:
using the document share engine to display in the collaborative interface a list of the plurality of members and an indicator showing which of the plurality of members has opened a selected synchronized file.

25. (Original) The method of claim 1 wherein the collaborative interface comprises an on-line chat mechanism.

26. (Original) The method of claim 1 wherein the collaborative interface comprises a mechanism for creating and storing comments related to a selected file.

27. (Currently amended) An apparatus at a first end point of a collaboration system for providing information and services that allows a plurality of members to interact collaboratively in

a shared folder in a folder-based file system that is part of an operating system with a user interface, the apparatus comprising:

a processor;

means for including a collaborative interface in the user interface through which a user may select at least one file in the folder-based file system as a synchronized file;

an interface that connects the collaborative interface to the collaboration system in order to retrieve and display information regarding the members in the user interface;

an interface between the folder-based file system and the collaboration system, the interface comprising:

a component that receives a notification from the folder-based file system of a change to a file stored in the folder-based file system; and

a file synchronizer that, in response to a received notification, determines[[a]] whether the notified change made in the folder-based file system relates to a file selected as a synchronized file; and

a document share engine that, when the change relates to a file selected as a synchronized file, communicates the change to at least one of the plurality of members of the collaboration system at a second end point and that receives changes to the at least one synchronized file from at least one of the plurality of members at the second end point.

28. (Original) The apparatus of claim 27 wherein the means for including the collaborative interface comprises means for designing and implementing a portion of the user interface as the collaborative interface.

29. (Original) The apparatus of claim 27 wherein the means for including the collaborative interface comprises means for enhancing the user interface to include the collaborative interface.

30. (Original) The apparatus of claim 27 wherein the means for including the collaborative interface comprises means for replacing a portion of the user interface with an interface specifically intended to support collaborative activity.

31. (Original) The apparatus of claim 27 wherein the interface comprises a web services interface that allows the collaborative interface to interact with the collaboration system to create a shared space.

32. (Original) The apparatus of claim 31 wherein the interface further comprises a web services interface that allows the collaborative interface to interact with the collaboration system to invite one of the plurality of members to join the shared space.

33. (Previously presented) The apparatus of claim 32 wherein the collaborative interface comprises means for displaying information regarding the plurality of members in the shared space.

34. (Original) The apparatus of claim 33 wherein the information regarding members in the shared space includes awareness information that indicates whether each member is on-line and available.

35. (Previously presented) The apparatus of claim 27 wherein the file synchronizer comprises means for maintaining for each of the at least one synchronized file in the folder-based file system, a snapshot that contains sufficient information to allow a determination to be made whether the at least one synchronized file has changed.

36. (Previously presented) The apparatus of claim 35 wherein the file synchronizer further comprises a file RAMP that receives a notification from the folder-based file system that the change has been made to the folder-based file system and means responsive to the notification for examining each file snapshot to determine which file has changed.

37. (Original) The apparatus of claim 27 wherein the file synchronizer comprises a web services interface that connects to the collaboration system.

38. (Original) The apparatus of claim 27 wherein the interface comprises a web services interface that allows the collaborative interface to interact with the collaboration system to create a shared space and wherein the document share engine comprises means for maintaining a list of members who are in the shared space.

39. (Previously presented) The apparatus of claim 38 wherein the document share engine further comprises means for maintaining for each member who is in the shared space information indicating whether that member has contents of the at least one synchronized file in the shared space.

40. (Previously presented) The apparatus of claim 39 further comprising means for creating a stub file and providing the stub file to each shared space member who does not have the contents of the at least one synchronized file.

41. (Original) The apparatus of claim 40 further comprising means for displaying the stub file in the user interface.

42. (Original) The apparatus of claim 41 further comprising means for downloading file contents from a source when a user selects the stub file display.

43. (Original) The apparatus of claim 42 wherein the source comprises a server.

44. (Original) The apparatus of claim 42 wherein the source comprises a computer of another member.

45. (Previously presented) The apparatus of claim 27 wherein the document share engine comprises means for determining changes in the at least one file and means for providing that changes to the collaboration system so that the changes are distributed to members in the shared folder.

46. (Original) The apparatus of claim 45 wherein the document share engine provides the file changes to the collaboration system as binary differences.

47. (Original) The apparatus of claim 27 wherein the interface comprises a web services interface that allows the collaborative interface to interact with the collaboration system to create a shared space and wherein the document share engine is located in the shared space and the document share engine further comprises means for receiving a change made in the shared space to a file; and means for communicating the change to the file synchronizer.

48. (Original) The apparatus of claim 47 wherein the file synchronizer comprises means for making the change in the folder based file system.

49. (Original) The apparatus of claim 47 wherein the document share engine comprises means for notifying each of the plurality of members that a file change has occurred.

50. (Original) The apparatus of claim 47 further comprising means cooperating with the document share engine and comprising means for displaying in the collaborative interface a list of the plurality of members and an indicator showing which of the plurality of members has opened a selected synchronized file.

51. (Original) The apparatus of claim 27 further comprising an on-line chat mechanism in the document share engine controlled by the collaborative interface.

52. (Original) The apparatus of claim 27 further comprises means controlled by the collaborative interface for creating and storing comments related to a selected file.

53. (Currently amended) A computer program product for providing information and services of a collaboration system that allows a plurality of members to interact collaboratively in a shared folder in a folder-based file system that is part of an operating system with a user interface, the computer program product comprising a computer storage medium having computer readable program code thereon, including:

program code, that when executed by a processor, for including a collaborative interface in the user interface through which a user may select at least one shared folder;

program code, that when executed by a processor, for using the collaborative interface to display information regarding the plurality of members collaborating within the context of the shared folder through the use of the collaborative system;

program code, that when executed by a processor, for receiving from the operating system an event notification indicating a change within the folder-based ~~filed~~ file system;

program code, that when executed by a processor, for determining whether the change made in the folder-based file system relates to the at least one shared folder, the program code for determining comprises program code for maintaining a snapshot of at least one file in the shared folder separate from the folder-based file system; and

program code, that when executed by a processor, for communicating the change to other members via the collaboration system.

54. (Cancelled)

55. (Previously presented) The computer program product of claim 53, further comprising:

program code for receiving from a member of the other members of the collaboration system an indication of a second change relating to the at least one shared folder; and

program code for applying the second change to the folder-based file system, whereby the shared folder is synchronized among the members of the collaboration system.